



National Transportation Safety Board

Washington, DC 20594

August 20, 1997

1967 - 30 Years of Transportation Safety - 1997

Office of the Chairman

Honorable Bud Shuster
Chairman, Committee on Transportation
and Infrastructure
House of Representatives
Washington, D. C. 205150

Dear Chairman Shuster:

This is in response to your July 16, 1997, letter regarding my July 10, 1997, testimony before the Committee on Transportation and Infrastructure, Subcommittee on Aviation. You forwarded with your letter additional questions for the record regarding the National Transportation Safety Board's investigation of the accident involving TWA flight 800. Below are the Safety Board's responses to your questions.

1. Last year, it was reported that there was an unidentified sound at the end of the cockpit voice recorder tape. Has that sound been identified?

Response: At the end of the cockpit voice recorder (CVR) tape there is an abrupt, short duration noise that has not been identified. The sound has been compared to other sounds provided from CVR tapes that the Safety Board has collected from various accidents and incidents. The sound does not match any previously identified signatures, including bomb explosions. We have been conducting tests in the United Kingdom involving explosives on a retired Boeing 747 during which we are recording sounds to hopefully better understand the sound on the TWA 800 CVR tape. Further, the Safety Board continues to conduct a series of tests to determine the events that may have led to the accident. In each of the planned tests using a Boeing 747, sound data will be collected that might eventually help to identify the sound on the TWA flight 800 CVR tape.

2. It has been reported that tests have been conducted in which a missile was exploded near the fuselage of a plane to see if that could have set off the fuel tank explosion. Who conducted those tests? What have they revealed?

Response: The FBI and the Federal Aviation Administration (FAA) conducted tests with the assistance of Department of Defense organizations in which explosives and missile warheads were detonated near airplane fuselages. Those tests found that the damage to the test airplanes was significantly different than that found on the wreckage of TWA flight 800.

3. Lightning has caused planes to explode in the past. Can lightening occur even in the absence of a thunderstorm? Could that have occurred.

Response: Lightning or a static discharge can occur without the presence of a thunderstorm, depending on whether the atmosphere is turbulent or if there are significant temperature differentials present. An examination of the meteorological conditions at the time of the accident would indicate a low probability for the generation of an atmospheric static discharge. Additionally, the examination of the TWA flight 800 wreckage has found no indication of a lightning strike, or that the flame arrestors at the wing tips had been activated. While the Safety Board continues to consider such a possibility, at this time there is no evidence to support such a finding.

4. Is it true that a Navy P-3 flying without its transponder and "marking" the ocean with an infrared beam as part of an exercise with a submarine passed 10,000 feet above the TWA jet just before the explosion? What was the P-3 doing there? Could infrared or laser beams have set off the explosion?

Response: At the time of the accident, a Navy P-3 airplane was transiting the area at an altitude of 20,000 feet on its way to a military operating area to conduct a training exercise. The transponder on the airplane was functioning intermittently. However, the airplane's track can be clearly identified on radar data. At the time of the explosion, the P-3 was about 3 miles to the southwest of TWA flight 800. Shortly after being told by the air traffic controllers that TWA flight 800 was missing, the P-3 turned around and descended to assist in locating the airplane. Interviews with the crew of the P-3 indicate that they were not conducting military operations at the time of the accident, and turned on their infrared sensors after the accident to locate the airplane or survivors. There is no indication that the infrared sensors on the P-3 could have ignited the fuel/air vapors in the center fuel tank of TWA flight 800. The examination of the wreckage has not provided any evidence of radiation by a laser being a factor in the accident.

5. Is it true that at the time of the crash, three of several military restricted areas near Long Island were active? Who requested the use of the airspace? Were Naval maneuvers being conducted there?

Response: There were military operation areas several hundred miles from the accident site that were being used for Naval maneuvers. These maneuvers were being conducted well outside the airspace being used for commercial flights. The Navy maneuvers included training exercises to detect and track submarines. In the time frame of this accident, the closest area in use was designated as ALTRV "Tango Billy." Its closest point was about 50 - 60 miles south of the accident site. The Navy P-3 airplane was en route to this block of airspace when the accident occurred.

6. Have French investigators been permitted to participate in the investigation?

Response: Representatives from the Bureau Enquetes-Accidents (BEA) of France have been present from the beginning of the Safety Board's investigation, will receive copies of all factual reports, and have been invited to attend all of the significant tests and meetings associated with the investigation.

7. Does the military sometimes practice by locking missile systems onto commercial aircraft but then not actually firing a missile?

Honorable Bud Shuster
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Response: The Safety Board understands that in the past military airplanes have practiced intercept maneuvers using unaware commercial airplanes. These maneuvers were usually accomplished in visual conditions. The Safety Board is unaware of any case where a missile weapon system was locked onto a commercial airplane.

8. Were all the aircraft engines intact when brought up? If not, how much of them was missing.

Response: The engines were substantially damaged by impact with the water. However, all of the major engine assemblies were recovered. Examination of the engines revealed no evidence of a pre-impact failure or external forces. Additionally, the data provided by the CVR and FDR indicate that the engines were functioning normally from takeoff until the accident.

9. Could you please comment on the theory of Bob Riordan of Dallas, Texas, copy attached that a fatigue crack exposing wires led to the explosion.


Response: Because of the age of the airplane and previous reports of fatigue cracks in the forward sections of other Boeing 747s, the Safety Board was concerned about the possibility of a structural failure as a factor in the accident. Examination by Safety Board metallurgists of all the fracture surfaces indicates that there is no evidence of preexisting fatigue damage that would have been a factor in the accident.

10. Have all possessions of the victims been returned to their families?

Response: All of the families receiving personal effects that have been associated to their family member have been contacted, and almost all of those have received the personal effects. A few remaining families have told the TWA third party representative that they are not emotionally ready to receive the belongings of their loved one. In early July, the process for returning personal effects that could not be associated to a specific victim was started by TWA and its contractor. A catalogue with approximately 1,500 photographs is being sent to those family members who have requested to see it.

I trust the above is responsive. Please do not hesitate to contact me at any time in the future if you require additional information regarding the Safety Board's investigation of this accident.

Sincerely,


Jim Hall
Chairman

BUD SHUSTER, Pennsylvania
Chairman



JAMES L. OBERSTAR, Minnesota
Ranking Democratic Member

Don Young, Alaska
Thomas Peir, Wisconsin
Sherwood Boehlert, New York
Herbert Bateman, Virginia
Howard Coble, North Carolina
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Thomas Fanning, Illinois
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Joseph Pitts, Pennsylvania
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Merrill Cook, Utah
John Cooksey, Louisiana

John Thune, South Dakota
Chip Pickering, Mississippi
Kay Granger, Texas
Jon Fox, Pennsylvania
Tom Davis, Virginia
Frank L. McDonald, New Jersey
J.C. Watts, Jr., Oklahoma

Committee on Transportation and Infrastructure

Congress of the United States

House of Representatives

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July 16, 1997

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James Traficant, Jr., Ohio
Peter DeFazio, Oregon
Bob Cline, Tennessee
Jerry Costello, Illinois
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Nick Lampson, Texas

Jack Schenendorf, Chief of Staff
Michael Struchiner, Deputy Chief of Staff

David Heymsfeld, Democratic Chief of Staff

Mr. Jim Hall
Chairman
National Transportation Safety Board
490 E. Le Enfant Plaza, SW
Washington, DC 20594

Dear Mr. Hall:

Thank you for testifying at our July 10 hearing on the TWA investigation. Your testimony was very helpful to the Subcommittee's understanding of the issues.

Unfortunately, other obligations prevented me from staying to hear your testimony. Therefore, I would like to pose the following questions for which I would ask you to provide written responses for the record. Please understand that many of the questions are asked not because I agree with the theory that underlies them, but merely because these issues have been raised by others, and I need your help in formulating answers to them. Please send a copy of your response to the Aviation Subcommittee in 2251 Rayburn House Office Building.

With kind regards, I remain

Sincerely,

BUD SHUSTER
CHAIRMAN

EGS:dsr
Enclosure

- Last year, it was reported that there was an unidentified sound at the end of the cockpit voice recorder tape. Has that sound been identified?
- It has been reported that tests have been conducted in which a missile was exploded near the fuselage of a plane to see if that could have set off the fuel tank explosion. Who conducted those tests? What have they revealed?
- Lightning has caused planes to explode in the past. Can lightning occur even in the absence of a thunderstorm? Could that have occurred?
- Is it true that a Navy P-3 flying without its transponder and "marking" the ocean with an infrared beam as part of an exercise with a submarine passed 10,000 feet above the TWA jet just before the explosion? What was the P-3 doing there? Could infrared or laser beams have set off the explosion?
- Is it true that at the time of the crash, three of seven military restricted areas near Long Island were active? Who requested the use of the airspace? Were Naval maneuvers being conducted there?
- Have French investigators been permitted to participate in the investigation?
- Does the military sometimes practice by locking missile systems onto commercial aircraft but then not actually firing the missile?
- Were all the aircraft engines intact when brought up? If not, how much of them was missing?
- Could you please comment on the theory of Bob Riordan of Dallas, Texas, copy attached, that a fatigue crack exposing wires led to the explosion.
- Have all the possessions of the victims been returned to their families?



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National Transportation Safety Board

Washington, DC 20594

August 20, 1997

Office of the Chairman

Honorable Pat Danner
House of Representatives
Washington, D. C. 20515-2506

Dear Congresswoman Danner:

This is in response to your letter providing additional questions for the record related to the hearing held July 10, 1997, before the Subcommittee on Aviation, House Committee on Transportation and Infrastructure. The Safety Board's responses to your questions are below.

1. If the FBI finds that its criminal investigation cannot support indictments, has it indicated that it will release its evidence and analysis to the NTSB?

Response: In discussions with FBI management, they have indicated that in the event their investigation finds no evidence of criminal intent, evidence in their possession relevant to the investigation, such as witness statements, will be provided to the Safety Board.

2. If this evidence is not available, will it be possible to conduct a complete public hearing?

Response: The Safety Board believes that there is a need for an open discussion of all of the factual information collected during our investigation, and we are committed to holding a public hearing on TWA flight 800 most likely before the end of the year. In the unlikely event that the FBI has not completed its investigation and there is insufficient time to allow us to prepare for a hearing this year, we may be forced to postpone the start of the hearing until early 1998. In any event, the Safety Board is committed to a full and complete public airing of the facts.

3. Will a "second set of eyes" investigative team be assembled to review NTSB findings?

Response: The Safety Board is the only Federal agency responsible for investigating aviation accidents, and its staff is world renowned for its expertise. Nonetheless, we are always open to assistance from other qualified sources, and have enlisted the support of engineers, scientists, and investigators from industry, academia, and other government agencies, including foreign governments, to assist in the investigation. Some of those include the California Institute of Technology, Desert Research Institute of the University of Nevada at Reno, Sandia National Laboratories, Aviation Accidents Investigation Bureau in the United Kingdom, Defense Evaluation and Research Agency in the United Kingdom, NASA, U.S. Air Force, U.S. Navy, Brookhaven National Laboratory, and the Oak Ridge National Laboratory. This effort will continue as the investigation progresses.

4. Has equal investigative weight been given to all evidence? For example, was recovered wreckage completely consistent with NTSB theories regarding a central fuel tank explosion?

Response: Yes. The investigation has considered and investigated all possible events that could have led to this accident from an uncontained engine failure, a structural failure, to even the extremely remote possibility of a meteor impact. To date all of the evidence is consistent with an explosion of the fuel/air mixture in the center fuel tank that resulted in the structural breakup of the airplane.

5. While the hearing established that the FBI interviewed all eyewitnesses to this accident, how many were interviewed by the NTSB? If not all of them, why not?

Response: The Safety Board has reviewed all of the FBI interview summaries and we have reinterviewed a number of those witnesses who we believe could provide more information to the investigation. The review of the FBI interview summaries found that many of the "witnesses" did not see or hear the actual event, but were reporting events after the aircraft crashed into the ocean or were providing third party information from other unknown sources. If there are any witnesses who have something more to contribute, the Safety Board would be happy to hear from them.

6. Did you interview all of the pilots in the area who reported sighting streaks of light near TWA Flight 800?

Response: The Safety Board has interviewed all the pilots who were operating in the vicinity of TWA flight 800 at the time of the accident.

7. Have you interviewed the crew of the P3 which was traveling near the location of Flight 800, moments before the explosion?

Response: The Safety Board and the FBI interviewed the crew of the Navy P-3 airplane. The Navy P-3 airplane was transiting the area on its way to a military operating area to conduct a training exercise and the airplane's track can be clearly identified on radar data. At the time of the explosion, the P-3 was about 3 miles to the southwest of TWA flight 800 at 20,000 feet. Shortly after being told by the air traffic controllers that TWA flight 800 was missing, the P-3 turned around and descended to assist in locating the airplane. Interviews with the crew of the P-3 indicate that they were not conducting any military operations at the time of the accident, and turned on their infrared sensors only after the accident in order to locate the airplane or survivors. Because the accident occurred behind the P-3 airplane, no crew saw the actual accident.

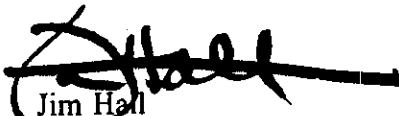
8. If you have not interviewed all eyewitnesses, does a failure to interview so many eyewitnesses to this disaster suggest that the NTSB is discounting evidence that does not fit a predetermined notion of what happened to Flight 800.

Response: The Safety Board and the FBI take the statements provided by the eye witnesses seriously, and we believe that the investigation would not be complete unless we or the FBI address what they observed. Please be assured that the Safety Board has not and will not discount any evidence in this investigation. It should be noted that the closest eye witness to the disaster was over 10 miles away, and that the accident airplane was flying at over 13,000 feet.

Honorable Pat Danner
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I trust this above is responsive. Please do not hesitate to contact me if you require additional information regarding the Safety Board's investigation of this accident.

Sincerely,



Jim Hall
Chairman

PAT DANNER
6TH DISTRICT, MISSOURI
COMMITTEE ON TRANSPORTATION
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RECEIVED
JUL 21 1997
Congress of the United States
House of Representatives
Washington, DC 20515-2506

July 10, 1997

Honorable James E. Hall, Chairman
National Transportation Safety Board
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Dear Chairman Hall:

I am writing with further questions regarding the investigation of the TWA Flight 800 tragedy. As you may recall, during the July 10 Aviation Subcommittee hearing, I indicated that I would submit these additional questions in writing.

I would appreciate it if you would provide answers to the following questions:

1. If the FBI finds that its criminal investigation cannot support indictments, has it indicated that it will release its evidence and analysis to the NTSB?
2. If this evidence is not available, will it be possible to conduct a complete public hearing?
3. Will a "second set of eyes" investigative team be assembled to review NTSB findings?
4. Has equal investigative weight been given to all evidence? For example, was recovered wreckage completely consistent with NTSB theories regarding a central fuel tank explosion?
5. While the hearing established that the FBI interviewed all eyewitnesses to this accident, how many were interviewed by the NTSB? If not all of them, why not?
6. Did you interview all of the pilots in the area who reported sighting streaks of light near TWA Flight 800?
7. Have you interviewed the crew of the P3 which was traveling near the location of Flight 800, moments before the explosion?
8. If you have not interviewed all eyewitnesses, does a failure to interview so many eyewitnesses to this disaster suggest that the NTSB is discounting evidence that does fit a predetermined notion of what happened to Flight 800?

Honorable James E. Hall
July 10, 1997
Page 2

I would appreciate your help in answering these questions. If I may provide additional information on any of these items, please feel free to contact my Legislative Assistant, Howard Moorin, at 225-7041.

Thank you in advance for your assistance.

Best regards,

A handwritten signature in black ink, appearing to be "Pat Danner", written over a horizontal line.

Pat Danner
Member of Congress

PD:hbm